

ABSTRACT OF THE DISCLOSURE

Disclosed is a surface acoustic wave substrate including: a piezoelectric or electrostrictive substrate having large electromechanical coupling coefficient; and a thin film formed on the substrate and having variation characteristics of frequency of a surface acoustic wave relative temperature variation opposite to that of the substrate. The substrate is a  $\text{LiNbO}_3$  substrate having a cut angle of rotated Y plate within a range from  $-10^\circ$  to  $+30^\circ$  and propagating a piezoelectric leaky surface wave having a propagation velocity higher than that of a Rayleigh type surface acoustic wave along X-axis direction or within a range of  $\pm 5^\circ$  with respect to X-axis direction. A value of  $H/\lambda$  falls within a range from 0.05 to 0.35, where H is the film thickness of the thin film, and  $\lambda$  is the wavelength of operating center frequency of the piezoelectric leaky surface wave.

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